

DATASHEET F-033

Series F-033, F-042

Vary-P Control Valves



High Pressure Control Valves for Gases

F-033 / F-042 are 2-phase control valves for applications with high differential pressures, up to 400 bar and a maximum operating pressure of 400 resp. 700 bar! These unique valves feature a pressure compensation mechanism, maintaining a constant pressure difference of 4 bar across the flow control section. By doing so both the inlet pressure and the outlet pressure may change without having any impact on the Vary-P valve function.

Technical specifications

Measurement / control system

Operating temperature	F-033C: -10...70°C F-033CI / F-042CI: -10...70°C F-033CX: -10...65°C
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Mechanical parts

Material (wetted parts)	stainless steel 316L or comparable
Pressure rating (PN)	F-033 series: 400 bar(a) F-042 series: 700 bar(a)
Min. ΔP	6 bar(d)
Max. ΔP	up to 400 bar(d)
Process connections	F-033 series: compression type or face seal (VCR/VCO) couplings; F-042 series: none (female thread); special high pressure connections on request
Seals	standard: Viton®; on request (F-033 series only): EPDM, Kalrez®
Protection class	F-033C: IP40 F-033CI / F-042CI: IP65 F-033CX-XBB: II 1 G/D Ex ia IIC T6 F-033CX-XCB: II 2 G/D Ex e mb II T4

Electrical properties

Electrical connection

Control valve options

External actuator options to be connected to the controller

Certification for hazardous areas

Approvals / certificates

Technical specifications subject to change without notice.

For dimensional drawings and hook-up diagrams please visit the [product page](#) on our [website](#)

Related products



SERIES F-001, F-011, F-021, V30I

Direct-operated control valves

Flow up to approx. 50
ln/min
Pressure up to
64/100/200 bar
Kv-max: 6.6×10^{-2}



SERIE F-002A, F-003A, F-003B

Pilot-Operated Control Valves

Flow up to approx. 500
m³n/h
Pressure up to 64/100
bar
Kv: 0.04...6.0



SERIES F-004A, F-004B

Bellows Valves with Pressure Compensation

Flow up to approx. 1000
ln/min
For low (differential)
pressure applications
Kv: 0.03...1.0